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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,824	07/19/2004	Aalbert Stek	NL 020067	8710

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

CHAUDRY, MUJTABA M

ART UNIT PAPER NUMBER

2133

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/501,824	Applicant(s) STEK ET AL.	
	Examiner Mujtaba K. Chaudry	Art Unit 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **2** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

Applicants' preliminary amendment to the claims, submitted July 19, 2004 has been accepted and entered.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

The Oath filed July 19, 2004 complies with all the requirements set forth in MPEP 602 and therefore is accepted.

Drawings

The drawings filed July 19, 2004 are accepted.

Specification

The disclosure is objected to because of the following informalities:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often

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used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title or claim(s). It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is not in conformance with the requirements stated in the MPEP. Applicants are suggested to rewrite the abstract using the information stated above including limiting the abstract to a single paragraph and not more than 150 words and on a separate sheet of paper.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

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- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and

problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the

World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The disclosure is objected to because it is not in conformance with the requirements stated herein above. For example, the specification does not specifically have sub-headings for the “field of invention,” “background of invention,” “summary” etc. Furthermore, the title of the invention is general as is not descriptive to the invention of the present application. A new title is requested.

Appropriate correction is required.

Claim Objections

Claim 2 is objected to because of the following informalities:

- The independent claim is written in dependent form since it states “encoded by a method as claimed in claim 1.” Applicants are requested to rewrite claim 2 incorporating the limitations of claim 1 so that it is clear that claim 2 is independent. Applicants may also opt to write claim in proper dependent form as per MPEP.

Appropriate correction is required.

Claim 11 is objected to because of the following informalities:

- The independent claim is written in dependent form since it states “encoded by a method as claimed in claim 1.” Applicants are requested to rewrite claim 11 incorporating the limitations of claim 1 so that it is clear that claim 11 is independent. Applicants may also opt to write claim in proper dependent form as per MPEP.

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Appropriate correction is required.

Claim 12 is objected to because of the following informalities:

- The independent claim is written in dependent form since it states “encoded by a method as claimed in claim 1.” Applicants are requested to rewrite claim 12 incorporating the limitations of claim 1 so that it is clear that claim 12 is independent. Applicants may also opt to write claim in proper dependent form as per MPEP.

Appropriate correction is required.

Claim 13 is objected to because of the following informalities:

- The independent claim is written in dependent form since it states “encoded by a method as claimed in claim 1.” Applicants are requested to rewrite claim 13 incorporating the limitations of claim 1 so that it is clear that claim 13 is independent. Applicants may also opt to write claim in proper dependent form as per MPEP.

Appropriate correction is required.

Claim 14 is objected to because of the following informalities:

- The independent claim is written in dependent form since it states “encoded by a method as claimed in claim 1.” Applicants are requested to rewrite claim 14 incorporating the limitations of claim 1 so that it is clear that claim 14 is independent. Applicants may also opt to write claim in proper dependent form as per MPEP.

Appropriate correction is required.

Allowable Subject Matter

Claims 1-14 would be allowed if the Applicant were to adopt the suggested changes as purposed by the Examiner in the objections and rejections above.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention pertains to a method of encoding user data into codevectors (C) of an error correcting code (ECC), comprising the steps of: generating a first block (B) of a fixed first number (Z1) of data symbols by taking a fixed second number (Z2), being smaller than said first number (Z1), of user data symbols (U), and a fixed third number (Z3) of dummy data symbols (D), and by arranging said user data symbols (U) and said dummy data symbols (D) in a predetermined order, encoding said first block (B) of data symbols using an ECC encoder (2) to obtain a codeword (E) having a fixed number of symbols, said codeword (E) comprising said first block (B) of data symbols and a second block of a fixed forth number (Z4) of parity symbols (P), and generating a codevector (C) by selecting a fifth predetermined number (Z5) of user data symbols (U2) and a sixth predetermined number (Z6) of parity symbols (P1) from said codeword (E), the sum of said fifth and sixth number being predetermined and smaller than the sum of said second and forth number. The prior art of record, Seshadri et al., teach information that is coded using a multi-level channel code, by which is meant that a) each class of information is redundancy coded using a different, respective channel code and that b) the resulting multi-level-coded words select for transmission signal points of a predetermined signal constellation. In preferred embodiments, the minimum Hamming distance (defined below) for the code used for any particular class of information is greater than the minimum Hamming distance for the code used for any less important class of information. The error probability for channels characterized

by Rayleigh fading assuming adequate interleaving, and coherent or differential coherent detection, at high SNR is, to a first, and typically adequate, approximation, proportional to the reciprocal of the signal-to-noise ratio (SNR) raised to the power of the minimum Hamming distance. In particular, Seshadri et al. teach a transmitter apparatus comprising, a means for encoding first and second portions of a stream of input data using first and second redundancy codes, respectively, to generate multi-level-coded words each of which has a value and includes at least one data element from each encoded portion, said first code having a minimum Hamming distance that is greater than a minimum Hamming distance of said second code, a means for selecting signal points of a predetermined signal constellation as a function of the values of said multi-level-coded words, and a means for transmitting a signal representing the selected signal points over a fading communication channel, said constellation and codes being such that, in the transmission of said signal, a probability of error for said first portion is less than a probability of error for said second portion. However, the prior arts of record do not teach nor fairly suggest encoding user data into codevectors (C) of an error correcting code (ECC), comprising the steps of: generating a first block (B) of a fixed first number (Z1) of data symbols by taking a fixed second number (Z2), being smaller than said first number (Z1), of user data symbols (U), and a fixed third number (Z3) of dummy data symbols (D), and by arranging said user data symbols (U) and said dummy data symbols (D) in a predetermined order, encoding said first block (B) of data symbols using an ECC encoder (2) to obtain a codeword (E) having a fixed number of symbols, said codeword (E) comprising said first block (B) of data symbols and a second block of a fixed forth number (Z4) of parity symbols (P), and generating a codevector (C) by selecting a fifth predetermined number (Z5) of user data symbols (U2) and a sixth predetermined number

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(Z6) of parity symbols (P1) from said codeword (E), the sum of said fifth and sixth number being predetermined and smaller than the sum of said second and forth number.

Independent claims 10 and 11 recite similar limitations to those of claim 1 and therefore are allowable for the reasons stated herein.

Claims 2-9 and 12-14 depend from independent claim 1 and inherently include limitations therein and therefore are allowable as well.

As allowable subject matter has been indicated, Applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

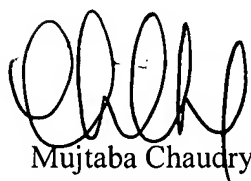
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Conclusion

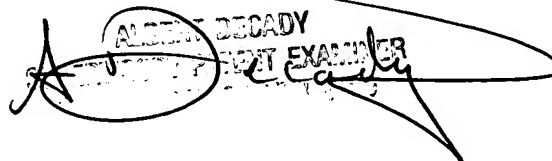
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiries concerning this communication should be directed to the examiner, Mujtaba Chaudry who may be reached at 703-305-7755. The examiner may normally be reached Mon – Thur 7:30 am to 4:30 pm and every other Fri 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Albert DeCady at 703-305-9595. The fax phone number for the organization where this application is assigned is 703-746-7239.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist at 703-305-3900.



Mujtaba Chaudry
Art Unit 2133
December 23, 2005



ALBERT DECADY
SUPERVISOR
EXAMINER